CASE REPORTS

Neonatal Thyrotoxicosis—Elevated Long-Acting Thyroid Stimulator (LATS) in Mother and Infant

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FEWER THAN 40 cases of neonatal thyrotoxicosis have been reported in the literature although it is suspected that the frequency of occurrence is considerably greater.[1]

Six cases have been reported in which an elevated level of long-acting thyroid-stimulating hormone (LATS) was found in both the mother and the child.[2-4]

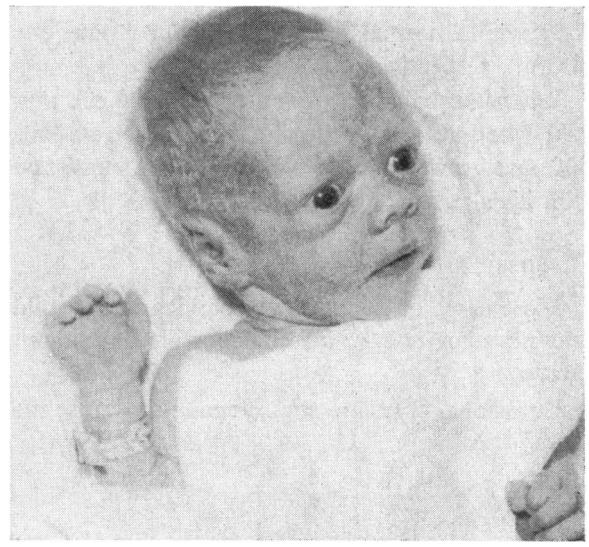
In the present case the possibility of neonatal thyrotoxicosis was initially considered because of exophthalmos in the mother.

LATS values were elevated in mother and infant.

Report of a Case

The baby, a boy, was born by breech extraction 11 September 1967 at Anaheim Memorial Hospital after 32 weeks' gestation. He was the product of the first pregnancy of an Rh positive mother. He weighed 3 pounds 13 ounces and was 17½ inches long.

The mother had had total thyroidectomy in June 1966 because of thyrotoxicosis associated with exophthalmos and goiter. Exophthalmos persisted and she regularly took desiccated thyroid, U.S.P., 0.2 gm a day. Neonatal thyrotoxicosis was first suspected after the mother's mild exophthalmos was observed by the pediatrician.



Patient at age nine days.

Noted on repeated examination of the infant were slight exophthalmos, sinus tachycardia (150 to 220), hyperactivity, diffuse goiter and poor weight gain (only 2½ ounces between age three and fourteen days despite good appetite). There was no tachypnea after age two days and no hepatomegaly at any time. Clinical evidence was observed of idiopathic respiratory distress syndrome (not radiographically confirmed) during the first two days of life.

Oral or diaper region moniliasis was noted intermittently from age nine days to two months despite nystatin therapy by ingestion and topical application. Protein-bound iodine at age two days was 19.1 mcg per 100 ml but was reported as iodine-contaminated (although there was no discoverable reason for contamination). At ten days

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the results of thyroxin-by-column and the triiodothyronine tests were elevated (over 14 mcg and 42.4 mcg per 100 ml, respectively). At 11 days the mother's and infant's LATS levels were high (the mother's 629 and the infant's 154, compared with the "no response" level of 100).

The baby was treated with phenobarbital, with or without Lugol's solution, from age 12 days to two months. At age two months he was thriving and weighed 10 pounds 3¼ ounces. The heart rate was 144, the thyroid gland was barely palpable and results of a T3 test and T4-by-column were within normal limits (9.3 and 3.1 mcg per 100 ml, respectively).

When the baby was seven months old the thyroid gland was not palpable, the heart rate was 132 and growth and development were consistent with his age.

Discussion

Most cases of neonatal thyrotoxicosis are mild and have an uneventful course with or without therapy.[5,6]

Occasional cases are severe enough to cause the infant to be seriously ill; and sometimes (rarely) it causes death.[5,7]

Various therapeutic measures have been suggested, including corticosteroids and antithyroid drugs prenatally, exchange transfusion, phenobarbital, iodides, antithyroid agents and anti-heart failure measures postnatally, depending upon the clinical situation.

It is difficult to know which method of management is most effective, because of the variability of severity of the disease, the lack of a large series of cases of comparable clinical severity treated in various ways in controlled studies, and the relative unavailability of LATS studies (which should be useful in predicting thyrotoxicosis in the infant if done on the mother in mid-pregnancy).

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A RESPITE FOR THE MOTHER OF A HYPERACTIVE CHILD

"I try, in dealing with hyperactive children, to be very sympathetic with the problems of the parents. Some of these children are extremely difficult to manage. . . . I consider it a necessity that the parent get a baby-sitter, preferably every day for a few hours, and suggest that often the best kind is someone like a high school girl who's available from three to five or three to six, perhaps the time of day when the mother most needs rest, time for refurbishing and a chance to cook dinner and freshen up for her husband. The high school girl should take the child out and away so the mother doesn't even see him. This kind of relief is extremely important."

—JEROME L. SCHULMAN, M.D., Chicago

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